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July 27, 2017

**VIA ELECTRONIC FILING**

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

Re: **Duke Energy Progress, LLC – Monthly Power Plant Performance Report**
**Docket No. 2006-224-E**

Dear Ms. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of June 2017.

Should you have any questions regarding this matter, please do not hesitate to contact me at 803.988.7130.

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Ms. Dawn Hipp, Office of Regulatory Staff
Mr. Jeffrey M. Nelson, Office of Regulatory Staff
Ms. Shannon Bowyer Hudson, Office of Regulatory Staff
Ms. Nanette Edwards, Office of Regulatory Staff
Michael Seaman-Huynh, Office of Regulatory Staff
Ms. Heather Shirley Smith, Duke Energy
Mr. Scott Elliott, Elliott & Elliott, P.A.
Mr. Garrett Stone, Brickfield, Burchette, Ritts & Stone, PC
Mr. Gary Walsh, Walsh Consulting, LLC

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

**Period: June, 2017**

| Station | Unit | Date of Outage | Duration of Outage | Scheduled / Unscheduled | Cause of Outage | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|---|
| Brunswick | 1 | None | | | | | |
| | 2 | None | | | | | |
| Harris | 1 | None | | | | | |
| Robinson | 2 | None | | | | | |

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
### June 2017

## Lee Energy Complex

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 1A | 6/27/2017 2:56:00 PM<br>To 6/27/2017 5:37:00 PM | Unsch | 5246 | Gas Turbine Control System - Hardware Problem | Control cards faulted causing unit to trip. | |

## Richmond County Station

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 10 | 6/1/2017 2:26:00 AM<br>To 6/1/2017 4:07:00 PM | Unsch | 5079 | Other Gas Turbine Combustor Problems | CT tripped due to high blade path temp spread | |

## Sutton Energy Complex

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 1B | 6/13/2017 3:23:00 PM<br>To 6/13/2017 4:37:00 PM | Unsch | 5240 | Gas Turbine - Fire Detection And Extinguishing Sys | Fire Protection System Watch Dog failure, A WDF cycles power, trip relay de-energized | |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

### June 2017
### Brunswick Nuclear Station

| | Unit 1 | | Unit 2 | |
|---|---|---|---|---|
| (A) MDC (mW) | 938 | | 932 | |
| (B) Period Hours | 720 | | 720 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 672,562 | 99.59 | 653,884 | 97.44 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 0 | 0.00 | 0 | 0.00 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 8,504 | 1.26 | 7,292 | 1.09 |
| (F) Net mWh Not Gen due to Full Forced Outages | 0 | 0.00 | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -5,706 | -0.85 | 9,864 | 1.47 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 | 0 | 0.00 |
| (J) Net mWh Possible in Period | 675,360 | 100.00% | 671,040 | 100.00% |
| (K) Equivalent Availability (%) | | 98.74 | | 98.91 |
| (L) Output Factor (%) | | 99.59 | | 97.44 |
| (M) Heat Rate (BTU/NkWh) | | 10,519 | | 10,874 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

### June 2017
### Harris Nuclear Station

| | Unit 1 | |
|---|---|---|
| (A) MDC (mW) | 928 | |
| (B) Period Hours | 720 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 680,788 | 101.89 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 0 | 0.00 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 0 | 0.00 |
| (F) Net mWh Not Gen due to Full Forced Outages | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -12,628 | -1.89 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 |
| (J) Net mWh Possible in Period | 668,160 | 100.00% |
| (K) Equivalent Availability (%) | | 100.00 |
| (L) Output Factor (%) | | 101.89 |
| (M) Heat Rate (BTU/NkWh) | | 10,621 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

### June 2017
### Robinson Nuclear Station

| | Unit 2 | |
|---|---|---|
| (A) MDC (mW) | 741 | |
| (B) Period Hours | 720 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 544,333 | 102.03 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 0 | 0.00 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 0 | 0.00 |
| (F) Net mWh Not Gen due to Full Forced Outages | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -10,813 | -2.03 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 |
| (J) Net mWh Possible in Period | 533,520 | 100.00% |
| (K) Equivalent Availability (%) | | 100.00 |
| (L) Output Factor (%) | | 102.03 |
| (M) Heat Rate (BTU/NkWh) | | 10,513 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## June 2017

### Lee Energy Complex

| | Unit 1A | Unit 1B | Unit 1C | Unit ST1 | Block Total |
|---|---|---|---|---|---|
| **(A) MDC (mW)** | 223 | 222 | 223 | 379 | 1,047 |
| **(B) Period Hrs** | 720 | 720 | 720 | 720 | 720 |
| **(C) Net Generation (mWh)** | 112,998 | 114,802 | 115,323 | 239,700 | 582,823 |
| **(D) Capacity Factor (%)** | 70.38 | 71.82 | 71.83 | 87.84 | 77.31 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 38,018 | 37,440 | 38,160 | 720 | 114,338 |
| **(H) Scheduled Derates: percent of Period Hrs** | 23.68 | 23.42 | 23.77 | 0.26 | 15.17 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 598 | 0 | 0 | 0 | 598 |
| **(J) Forced Outages: percent of Period Hrs** | 0.37 | 0.00 | 0.00 | 0.00 | 0.08 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 317 | 317 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.12 | 0.04 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 8,946 | 7,598 | 7,077 | 32,143 | 55,764 |
| **(N) Economic Dispatch: percent of Period Hrs** | 5.57 | 4.75 | 4.41 | 11.78 | 7.40 |
| **(O) Net mWh Possible in Period** | 160,560 | 159,840 | 160,560 | 272,880 | 753,840 |
| **(P) Equivalent Availability (%)** | 75.95 | 76.58 | 76.23 | 99.62 | 84.71 |
| **(Q) Output Factor (%)** | 70.64 | 71.82 | 71.83 | 87.84 | 77.38 |
| **(R) Heat Rate (BTU/NkWh)** | 9,489 | 9,472 | 9,430 | 4,195 | 7,296 |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## June 2017

### Richmond County Station

| | Unit 7 | Unit 8 | Unit ST4 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 189 | 189 | 175 | 553 |
| **(B) Period Hrs** | 720 | 720 | 720 | 720 |
| **(C) Net Generation (mWh)** | 106,250 | 105,232 | 124,848 | 336,330 |
| **(D) Capacity Factor (%)** | 78.08 | 77.33 | 99.09 | 84.47 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 25,200 | 25,920 | 4,320 | 55,440 |
| **(H) Scheduled Derates: percent of Period Hrs** | 18.52 | 19.05 | 3.43 | 13.92 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 0 | 0 | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 4,630 | 4,928 | 0 | 9,558 |
| **(N) Economic Dispatch: percent of Period Hrs** | 3.40 | 3.62 | 0.00 | 2.40 |
| **(O) Net mWh Possible in Period** | 136,080 | 136,080 | 126,000 | 398,160 |
| **(P) Equivalent Availability (%)** | 81.48 | 80.95 | 96.57 | 86.08 |
| **(Q) Output Factor (%)** | 78.08 | 77.62 | 99.09 | 84.58 |
| **(R) Heat Rate (BTU/NkWh)** | 11,658 | 11,430 | 0 | 7,259 |

Notes:

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- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## June 2017

### Richmond County Station

| | Unit 9 | Unit 10 | Unit ST5 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 214 | 214 | 248 | 676 |
| **(B) Period Hrs** | 720 | 720 | 720 | 720 |
| **(C) Net Generation (mWh)** | 124,326 | 121,939 | 167,910 | 414,175 |
| **(D) Capacity Factor (%)** | 80.69 | 79.14 | 94.04 | 85.10 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 28,800 | 27,546 | 0 | 56,346 |
| **(H) Scheduled Derates: percent of Period Hrs** | 18.69 | 17.88 | 0.00 | 11.58 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 2,928 | 0 | 2,928 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 1.90 | 0.00 | 0.60 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 954 | 1,666 | 10,650 | 13,270 |
| **(N) Economic Dispatch: percent of Period Hrs** | 0.62 | 1.08 | 5.96 | 2.73 |
| **(O) Net mWh Possible in Period** | 154,080 | 154,080 | 178,560 | 486,720 |
| **(P) Equivalent Availability (%)** | 81.31 | 80.22 | 100.00 | 87.82 |
| **(Q) Output Factor (%)** | 80.69 | 80.72 | 94.04 | 85.63 |
| **(R) Heat Rate (BTU/NkWh)** | 11,527 | 11,449 | 0 | 6,831 |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## June 2017

### Sutton Energy Complex

| | Unit 1A | Unit 1B | Unit ST1 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 225 | 225 | 267 | 717 |
| **(B) Period Hrs** | 720 | 720 | 720 | 720 |
| **(C) Net Generation (mWh)** | 116,736 | 116,390 | 145,044 | 378,170 |
| **(D) Capacity Factor (%)** | 72.06 | 71.85 | 75.45 | 73.25 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 39,600 | 38,814 | 720 | 79,134 |
| **(H) Scheduled Derates: percent of Period Hrs** | 24.44 | 23.96 | 0.37 | 15.33 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 278 | 0 | 278 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.17 | 0.00 | 0.05 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 163 | 163 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.08 | 0.03 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 5,664 | 6,519 | 46,313 | 58,496 |
| **(N) Economic Dispatch: percent of Period Hrs** | 3.50 | 4.02 | 24.09 | 11.33 |
| **(O) Net mWh Possible in Period** | 162,000 | 162,000 | 192,240 | 516,240 |
| **(P) Equivalent Availability (%)** | 75.56 | 75.87 | 99.54 | 84.59 |
| **(Q) Output Factor (%)** | 72.06 | 71.97 | 75.45 | 73.29 |
| **(R) Heat Rate (BTU/NkWh)** | 11,518 | 11,464 | 0 | 7,084 |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

# Duke Energy Progress
# Intermediate Power Plant Performance
# Review Plan
## June 2017

| | | Mayo Station<br>Unit 1 |
|---|---|---|
| **(A)** | **MDC (mW)** | 746 |
| **(B)** | **Period Hrs** | 720 |
| **(C)** | **Net Generation (mWh)** | 167,139 |
| **(D)** | **Net mWh Possible in Period** | 537,120 |
| **(E)** | **Equivalent Availability (%)** | 97.30 |
| **(F)** | **Output Factor (%)** | 44.55 |
| **(G)** | **Capacity Factor (%)** | 31.12 |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Intermediate Power Plant Performance
# Review Plan
## June 2017

| | Roxboro Station | | |
|---|---|---|---|
| | **Unit 2** | **Unit 3** | **Unit 4** |
| **(A) MDC (mW)** | 673 | 698 | 711 |
| **(B) Period Hrs** | 720 | 720 | 720 |
| **(C) Net Generation (mWh)** | 170,547 | 258,870 | 39,388 |
| **(D) Net mWh Possible in Period** | 484,560 | 502,560 | 511,920 |
| **(E) Equivalent Availability (%)** | 99.28 | 92.21 | 13.43 |
| **(F) Output Factor (%)** | 53.62 | 54.19 | 36.98 |
| **(G) Capacity Factor (%)** | 35.20 | 51.51 | 7.69 |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

### July 2016 - June 2017
### Brunswick Nuclear Station

| | Unit 1 | | Unit 2 | |
|---|---|---|---|---|
| (A) MDC (mW) | 938 | | 932 | |
| (B) Period Hours | 8760 | | 8760 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 8,143,616 | 99.11 | 7,133,693 | 87.38 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 70,647 | 0.86 | 691,653 | 8.47 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 52,416 | 0.64 | 217,076 | 2.66 |
| (F) Net mWh Not Gen due to Full Forced Outages | 0 | 0.00 | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -49,799 | -0.61 | 121,898 | 1.49 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 | 0 | 0.00 |
| (J) Net mWh Possible in Period | 8,216,880 | 100.00% | 8,164,320 | 100.00% |
| (K) Equivalent Availability (%) | | 97.79 | | 90.18 |
| (L) Output Factor (%) | | 99.97 | | 95.46 |
| (M) Heat Rate (BTU/NkWh) | | 10,420 | | 10,818 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

### July 2016 - June 2017
### Harris Nuclear Station

| | Unit 1 | |
|---|---|---|
| (A) MDC (mW) | 928 | |
| (B) Period Hours | 8760 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 7,500,283 | 92.26 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 534,528 | 6.58 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 50,574 | 0.62 |
| (F) Net mWh Not Gen due to Full Forced Outages | 229,432 | 2.82 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -185,537 | -2.28 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 |
| (J) Net mWh Possible in Period | 8,129,280 | 100.00% |
| (K) Equivalent Availability (%) | | 90.25 |
| (L) Output Factor (%) | | 101.83 |
| (M) Heat Rate (BTU/NkWh) | | 10,484 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

### July 2016 - June 2017
### Robinson Nuclear Station

| | Unit 2 | |
|---|---|---|
| (A) MDC (mW) | 741 | |
| (B) Period Hours | 8760 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 5,586,580 | 86.06 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 904,402 | 13.93 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 1,240 | 0.02 |
| (F) Net mWh Not Gen due to Full Forced Outages | 97,281 | 1.50 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -98,343 | -1.51 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 |
| (J) Net mWh Possible in Period | 6,491,160 | 100.00% |
| (K) Equivalent Availability (%) | | 84.15 |
| (L) Output Factor (%) | | 101.77 |
| (M) Heat Rate (BTU/NkWh) | | 10,522 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## July, 2016 through June, 2017

### Lee Energy Complex

| | Unit 1A | Unit 1B | Unit 1C | Unit ST1 | Block Total |
|---|---|---|---|---|---|
| **(A) MDC (mW)** | 208 | 207 | 208 | 379 | 1,001 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 1,289,654 | 1,282,728 | 1,295,530 | 2,382,584 | 6,250,496 |
| **(D) Capacity Factor (%)** | 70.95 | 70.91 | 71.04 | 71.83 | 71.29 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 199,301 | 165,449 | 185,256 | 208,770 | 758,776 |
| **(F) Scheduled Outages: percent of Period Hrs** | 10.96 | 9.15 | 10.16 | 6.29 | 8.65 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 112,547 | 106,893 | 111,828 | 129,246 | 460,514 |
| **(H) Scheduled Derates: percent of Period Hrs** | 6.19 | 5.91 | 6.13 | 3.90 | 5.25 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 19,395 | 317 | 9,935 | 259,811 | 289,457 |
| **(J) Forced Outages: percent of Period Hrs** | 1.07 | 0.02 | 0.54 | 7.83 | 3.30 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 25,638 | 25,638 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.77 | 0.29 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 196,791 | 253,542 | 221,044 | 311,040 | 982,416 |
| **(N) Economic Dispatch: percent of Period Hrs** | 10.83 | 14.02 | 12.12 | 9.38 | 11.21 |
| **(O) Net mWh Possible in Period** | 1,817,688 | 1,808,928 | 1,823,592 | 3,317,088 | 8,767,296 |
| **(P) Equivalent Availability (%)** | 81.11 | 85.80 | 84.12 | 81.20 | 82.50 |
| **(Q) Output Factor (%)** | 81.70 | 84.03 | 83.43 | 83.64 | 83.27 |
| **(R) Heat Rate (BTU/NkWh)** | 9,518 | 9,544 | 9,464 | 3,711 | 7,298 |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## July, 2016 through June, 2017

### Richmond County Station

| | Unit 7 | Unit 8 | Unit ST4 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 179 | 178 | 172 | 529 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 981,427 | 963,904 | 1,120,378 | 3,065,709 |
| **(D) Capacity Factor (%)** | 62.51 | 61.74 | 74.52 | 66.15 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 386,299 | 385,512 | 385,399 | 1,157,210 |
| **(F) Scheduled Outages: percent of Period Hrs** | 24.60 | 24.69 | 25.63 | 24.97 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 70,713 | 71,259 | 12,087 | 154,058 |
| **(H) Scheduled Derates: percent of Period Hrs** | 4.50 | 4.56 | 0.80 | 3.32 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 4,438 | 11,763 | 0 | 16,201 |
| **(J) Forced Outages: percent of Period Hrs** | 0.28 | 0.75 | 0.00 | 0.35 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 8,198 | 8,198 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.55 | 0.18 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 127,156 | 128,738 | 0 | 233,311 |
| **(N) Economic Dispatch: percent of Period Hrs** | 8.10 | 8.25 | 0.00 | 5.03 |
| **(O) Net mWh Possible in Period** | 1,570,032 | 1,561,176 | 1,503,480 | 4,634,688 |
| **(P) Equivalent Availability (%)** | 69.91 | 69.26 | 72.71 | 71.18 |
| **(Q) Output Factor (%)** | 83.53 | 83.31 | 100.39 | 88.91 |
| **(R) Heat Rate (BTU/NkWh)** | 11,483 | 11,346 | 0 | 7,244 |

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## July, 2016 through June, 2017

### Richmond County Station

| | Unit 9 | Unit 10 | Unit ST5 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 202 | 202 | 248 | 652 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 1,355,779 | 1,372,704 | 1,827,035 | 4,555,518 |
| **(D) Capacity Factor (%)** | 76.67 | 77.63 | 83.98 | 79.75 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 196,305 | 194,204 | 224,104 | 614,612 |
| **(F) Scheduled Outages: percent of Period Hrs** | 11.10 | 10.98 | 10.30 | 10.76 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 78,958 | 77,555 | 22,233 | 178,746 |
| **(H) Scheduled Derates: percent of Period Hrs** | 4.47 | 4.39 | 1.02 | 3.13 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 5,165 | 3,667 | 446 | 9,277 |
| **(J) Forced Outages: percent of Period Hrs** | 0.29 | 0.21 | 0.02 | 0.16 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 132,162 | 120,239 | 101,635 | 354,036 |
| **(N) Economic Dispatch: percent of Period Hrs** | 7.47 | 6.80 | 4.67 | 6.20 |
| **(O) Net mWh Possible in Period** | 1,768,368 | 1,768,368 | 2,175,454 | 5,712,190 |
| **(P) Equivalent Availability (%)** | 83.95 | 84.15 | 88.68 | 85.95 |
| **(Q) Output Factor (%)** | 87.29 | 87.47 | 93.98 | 89.91 |
| **(R) Heat Rate (BTU/NkWh)** | 11,481 | 11,382 | 0 | 6,847 |

Notes:

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- (R) Includes Light Off BTU's

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## July, 2016 through June, 2017

### Sutton Energy Complex

| | Unit 1A | Unit 1B | Unit ST1 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 210 | 210 | 266 | 685 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 1,392,854 | 1,421,635 | 1,718,116 | 4,532,605 |
| **(D) Capacity Factor (%)** | 75.90 | 77.46 | 73.74 | 75.54 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 98,850 | 81,163 | 126,095 | 306,108 |
| **(F) Scheduled Outages: percent of Period Hrs** | 5.39 | 4.42 | 5.41 | 5.10 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 110,694 | 108,480 | 33,440 | 252,614 |
| **(H) Scheduled Derates: percent of Period Hrs** | 6.03 | 5.91 | 1.44 | 4.21 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 2,797 | 3,176 | 2,474 | 8,448 |
| **(J) Forced Outages: percent of Period Hrs** | 0.15 | 0.17 | 0.11 | 0.14 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 3,046 | 3,046 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.13 | 0.05 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 230,013 | 220,753 | 446,892 | 897,659 |
| **(N) Economic Dispatch: percent of Period Hrs** | 12.53 | 12.03 | 19.18 | 14.96 |
| **(O) Net mWh Possible in Period** | 1,835,208 | 1,835,208 | 2,330,064 | 6,000,480 |
| **(P) Equivalent Availability (%)** | 89.16 | 90.21 | 92.94 | 90.50 |
| **(Q) Output Factor (%)** | 82.82 | 83.24 | 78.33 | 81.18 |
| **(R) Heat Rate (BTU/NkWh)** | 11,415 | 11,316 | 0 | 7,057 |

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- (R) Includes Light Off BTU's

# Duke Energy Progress
# Intermediate Power Plant
# Performance Review Plan
## July, 2016 through June, 2017

### Mayo Station

| Units | Unit 1 |
|---|---|
| **(A) MDC (mW)** | 740 |
| **(B) Period Hrs** | 8,760 |
| **(C) Net Generation (mWh)** | 1,931,049 |
| **(D) Net mWh Possible in Period** | 6,478,872 |
| **(E) Equivalent Availability (%)** | 87.07 |
| **(F) Output Factor (%)** | 53.36 |
| **(G) Capacity Factor (%)** | 29.81 |

Notes:

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# Duke Energy Progress
# Intermediate Power Plant
# Performance Review Plan
## July, 2016 through June, 2017

**Roxboro Station**

| Units | Unit 2 | Unit 3 | Unit 4 |
|---|---|---|---|
| **(A) MDC (mW)** | 672 | 696 | 707 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 2,134,307 | 2,337,682 | 1,622,239 |
| **(D) Net mWh Possible in Period** | 5,889,576 | 6,093,816 | 6,189,984 |
| **(E) Equivalent Availability (%)** | 96.20 | 90.75 | 72.89 |
| **(F) Output Factor (%)** | 71.06 | 63.07 | 69.48 |
| **(G) Capacity Factor (%)** | 36.24 | 38.36 | 26.21 |

Notes:

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# Duke Energy Progress
## Outages for 100 mW or Larger Units
## June, 2017

| Unit Name | Capacity Rating (mW) | Full Outage Hours | | |
|---|---|---|---|---|
| | | Scheduled | Unscheduled | Total |
| **Brunswick 1** | **938** | **0.00** | **0.00** | **0.00** |
| **Brunswick 2** | **932** | **0.00** | **0.00** | **0.00** |
| **Harris 1** | **928** | **0.00** | **0.00** | **0.00** |
| **Robinson 2** | **741** | **0.00** | **0.00** | **0.00** |

# Duke Energy Progress
## Outages for 100 mW or Larger Units
## June 2017

| Unit Name | Capacity Rating (mW) | Full Outage Hours | | Total Outage Hours |
|---|---|---|---|---|
| | | Scheduled | Unscheduled | |
| Asheville Steam 1 | 192 | 0.00 | 115.68 | 115.68 |
| Asheville Steam 2 | 192 | 0.00 | 0.00 | 0.00 |
| Asheville CT 3 | 185 | 124.25 | 28.12 | 152.37 |
| Asheville CT 4 | 185 | 0.00 | 0.00 | 0.00 |
| Darlington CT 12 | 133 | 0.00 | 415.52 | 415.52 |
| Darlington CT 13 | 133 | 0.00 | 15.00 | 15.00 |
| Lee Energy Complex CC 1A | 223 | 0.00 | 2.68 | 2.68 |
| Lee Energy Complex CC 1B | 222 | 0.00 | 0.00 | 0.00 |
| Lee Energy Complex CC 1C | 223 | 0.00 | 0.00 | 0.00 |
| Lee Energy Complex CC ST1 | 379 | 0.00 | 0.00 | 0.00 |
| Mayo Steam 1 | 746 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 1 | 183 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 2 | 183 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 3 | 185 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 4 | 186 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 6 | 179 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 7 | 189 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 8 | 189 | 0.00 | 0.00 | 0.00 |
| Richmond County CC ST4 | 175 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 9 | 214 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 10 | 214 | 0.00 | 13.68 | 13.68 |
| Richmond County CC ST5 | 248 | 0.00 | 0.00 | 0.00 |

Notes:

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# Duke Energy Progress
## Outages for 100 mW or Larger Units
## June 2017

| Unit Name | Capacity Rating (mW) | Full Outage Hours | | Total Outage Hours |
|---|---|---|---|---|
| | | Scheduled | Unscheduled | |
| Roxboro Steam 1 | 380 | 0.00 | 0.00 | 0.00 |
| Roxboro Steam 2 | 673 | 0.00 | 0.00 | 0.00 |
| Roxboro Steam 3 | 698 | 35.67 | 0.00 | 35.67 |
| Roxboro Steam 4 | 711 | 0.00 | 570.18 | 570.18 |
| Sutton Energy Complex CC 1A | 225 | 0.00 | 0.00 | 0.00 |
| Sutton Energy Complex CC 1B | 225 | 0.00 | 1.23 | 1.23 |
| Sutton Energy Complex CC ST1 | 267 | 0.00 | 0.00 | 0.00 |
| Wayne County CT 10 | 192 | 0.00 | 0.00 | 0.00 |
| Wayne County CT 11 | 192 | 0.00 | 0.00 | 0.00 |
| Wayne County CT 12 | 193 | 0.00 | 0.00 | 0.00 |
| Wayne County CT 13 | 185 | 0.00 | 0.00 | 0.00 |
| Wayne County CT 14 | 197 | 21.00 | 0.00 | 21.00 |

Notes:

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